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## DR. FLETCHER DISCUSSES NASA'S 15th ANNIVERSARY

*Directs Attention to Achievements on Which  
Agency's Future Is  
Based*

NASA's 15th anniversary will be observed during the week of Oct. 1. We think of ourselves as a new agency, but for 15 eventful years now—under four Presidents—we have borne the responsibility of moving America into the Space Age, while also maintaining American leadership in the closely related field of aeronautical research.

This is a significant anniversary, not just because of the number 15, but because so much has been accomplished in the five years since we celebrated our 10th anniversary in 1968.



Dr. Fletcher

It is a happy anniversary because we have successfully completed the major programs of our first 15 years (except Skylab, which still has several months to go), and because we have now made a good start on the new programs that will help make the next 15 years exciting and productive, including ASTP, the Space Shuttle, ERTS, Viking, and the first missions to Jupiter and Mercury.

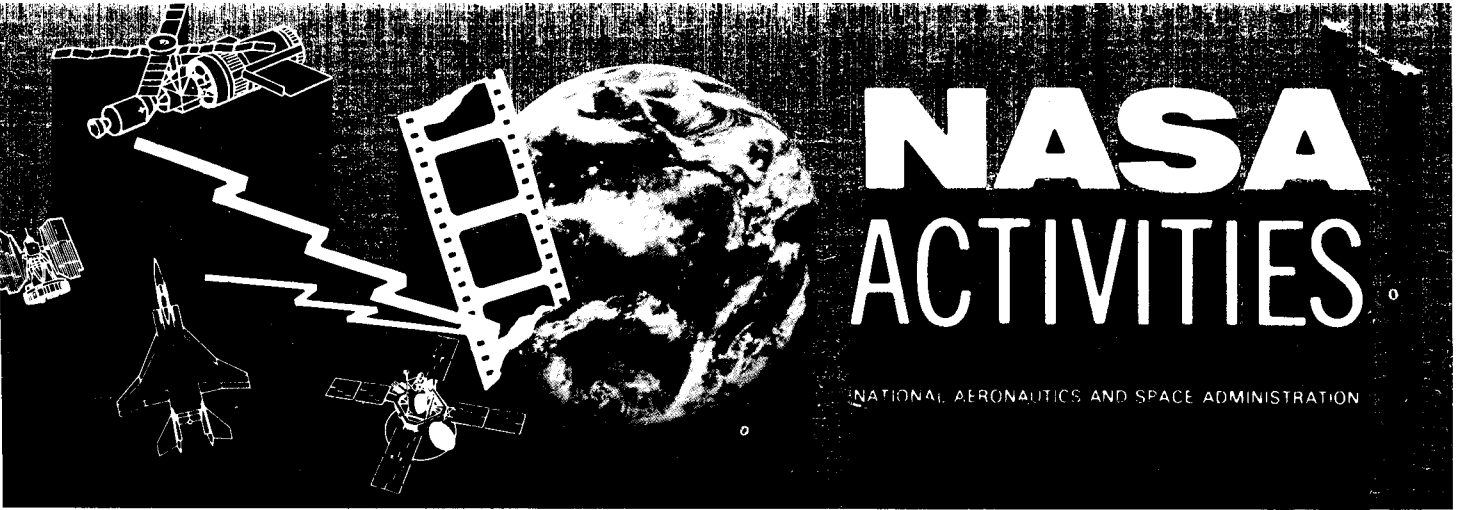
## NASA Accomplishments

What we have accomplished during our first 15 years in terms of specific programs is well known. I would like to take this opportunity to direct attention to the broader achievements on which our future as an agency is now based:

1. Most important was an achievement in the political process which created the conditions for all the other achievements that NASA has made and expects to make in this century. I mean the establishment of NASA as a strong central agency of the Federal Government empowered to define and demonstrate Space Age opportunities and

## COVER

The fiery night launch of Apollo 17, last of the program, forms a colorful background reminiscent of NASA's highly successful first 15 years.



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take the lead in developing the new technology required to exploit these opportunities.

At the dawn of the Space Age, we Americans were compelled to demonstrate, for ourselves and the world, that our democratic society and its free enterprise system could be effectively mobilized and directed to carry out the most challenging R&D assignments in a timely and efficient manner. NASA has done that for America in its first 15 years, and it is an achievement in which everyone at NASA can take great pride and satisfaction.

2. NASA provided the governmental structure needed for space progress, but appropriate goals were needed, too, to reaffirm American leadership in science and technology and rapidly advance American capabilities for exploring and using space. It is one of the great achievements of NASA that our people could confidently recommend to Vice President Johnson and President Kennedy, and to the Congress, the lunar landing goal that sparked the Apollo program—and to President Nixon and the Congress the Space Shuttle concept that has become the key technology development effort for this decade, and which will shape America's future in space for several decades to come.

3. In our first 15 years, we have created a strong base for further progress in each of the main areas of space opportunity—science, exploration, and applications—and have placed increasing emphasis on applications as the years went on and capabilities for winning practical benefits increased.

4. International cooperation in space has been encouraged with patience and persistence and has become part of NASA's way of life. Two outstanding current examples are the Apollo-Soyuz Test Project and the Western European interest in developing the Spacelab module for the Space Shuttle. Many other cooperative efforts are underway to use space for science, communications, and Earth observations. I believe that in our first 15 years we have made a lasting contribution to the cause of international cooperation in space by stressing the promise of space and acting to share it with other nations.

5. Rather unexpectedly, Earth observations from satellites have emerged in recent years as one of the most promising of space uses, giving NASA the clear opportunity to develop the Space Age tools needed to help solve such newly recognized global problems as air and water pollution,

dwindling natural resources, and inadequate planning of land uses.

6. I have mentioned the creation of NASA as a valuable contribution to the theory and practice of American government in the modern world. In the course of our first 15 years, we have expanded this contribution by developing and demonstrating our ability to work closely with other agencies of government, such as the Departments of Commerce and Interior, to help them identify operational uses of Earth satellites and to supply the new technology and other services required to establish, maintain, and improve their operational systems. It is also important that NASA and the Department of Defense are working closely together to exchange information of mutual benefit and to avoid unnecessary duplication of effort in both space and aeronautics. We have an excellent example of that cooperation in the Space Shuttle, which is being developed by NASA but which will also be used by the Department of Defense.

NASA's future, I am sure, is closely tied to our continuing ability to serve the many other agencies of government which, in turn, directly serve the people.

### Looking to the Future

For most of us, the first 15 years of the Space Age were dominated by Apollo—but now we are moving out into a period of preparation for much more intensive uses of space in the 1980s. It is time to put more emphasis on where we are going, not where we have been.

Whatever we call it, we are now in a new and different phase of the American space effort, and the beginning of this new phase does correspond roughly to the beginning of NASA's second 15 years in space.

Looking ahead, I suggest we consider some of the ways that NASA's second 15 years will be different from the first.

We have returned from the Moon, so to speak, and will concentrate during the 1970s on improving our technology and our capabilities for using manned and unmanned spacecraft in Earth orbit. Skylab and the Space Shuttle are major steps in that direction.

Unmanned exploration of the planets is going to be much more varied, much more ambitious, and, I hope, much more rewarding in the next few years than in the first 15. In the Sixties we demonstrated we could fly out past Mars and Venus and return useful images and data. Mariner 9

was a big step forward, operating in Mars orbit for many months and sending back detailed photographs of most of that planet. With the help of these fine photographs, the sites for the Viking landings on Mars in 1976 have been selected.

Pioneer 10 will photograph Jupiter and one of its moons as it swings by in December on its way out of the solar system. A second Pioneer has been launched toward Jupiter, and a Mariner will soon begin the first flight by both Venus and Mercury. Next year, the first of two Helios spacecraft under development by the Federal Republic of Germany will be launched for close-in studies of the Sun. Two Mariner flights by Jupiter and Saturn are scheduled for launch in 1977.

### Public Interest Essential

You can see that we do have a great deal planned in our planetary programs for the first third of the next 15 years. I am hopeful that the results from presently planned missions, particularly the pictures from Jupiter in December, will kindle public interest here and abroad in more extensive exploration of the planets. The Viking landings should also have a stimulating effect on public interest in astronautics. This will be especially true if evidence of life is found on Mars—or evidence of the feasibility of colonizing Mars. Public interest is an essential factor if we are to continue with planetary exploration after presently approved programs are completed.

In the space applications field, the past 15 years have been a period of experimentation, demonstration, and the first use of operational systems. To the original concepts of communications and weather satellites we have added the concept of the versatile Earth observation satellite now being demonstrated by ERTS-1 and by some of the experiments in Skylab.

In the next 15 years, the emphasis will be on maturing the technology of applications satellites and broadening the scope of the operational systems. I expect applications to become a dynamic NASA endeavor in support of the fast growing number of user agencies.

A good example of maturing technology in the applications field is the Synchronous Meteorological Satellites which will be launched next year to keep a continuous watch over the world's weather. They will enable us to watch the birth of storms and to study many short-lived weather phenomena which are difficult to study from any other vantage point than synchronous orbit. They

will be the first operational weather satellites in synchronous orbit.

Another thing we are doing—and doing very well—is learning how to record, distribute, and quickly utilize the great wealth of data our applications satellites can send down.

### Large Unmanned Spacecraft

No definite decisions have been made, but I think we will be moving sooner or later into the development of a system, or perhaps several systems, of large unmanned spacecraft performing a wide variety of Earth observations. Important decisions on how to best use our sophisticated new capabilities for Earth observations will have to be made by the end of this decade.

We enter the second 15 years in space without the heady atmosphere, the excitement, and the international rivalry of the early Apollo years. In this decade the emphasis is going to be on steady progress, practical returns, and cost reduction. The Space Shuttle is our major technological effort to give us easy and routine access to space. And we have a major campaign to reduce the cost of designing and building spacecraft. I believe most of you are familiar with the fact that the Shuttle will cut space costs in two main ways. One, it is reusable; therefore, the day of the expendable rocket will soon be over (except for the small Scout and perhaps other special purpose expendable rockets). Two, the restraints in designing and building Shuttle-launched spacecraft will be much less severe, so that we can use more standard designs and components and more off-the-shelf hardware. Our main challenge in this period of reduced budgets has shifted from getting to the Moon to providing more returns from space at less cost to the taxpayer. It is a worthy challenge for this decade.

In connection with activities closer to Earth, NASA is conducting a very vigorous research and development program in aeronautics aimed directly at protecting the environment and relieving air traffic congestion, significant work which promises benefits to the public at large, as well as the airline industry. Among the developments on which we are working are:

Modifications of existing jet engines for cleaner, quieter operation.

Studies on the environmental impact of high altitude flights, including operations at supersonic speeds, and the feasibility of using liquid hydrogen as a fuel for large aircraft.

Operational studies of different takeoff and

landing approaches to reduce noise levels around airports.

In addition to these efforts, NASA is also working on programs to provide more efficient engines and aircraft, which would produce savings both in the amount of fossil fuel used and in overall operating costs.

### Emphasis on New Programs

There is an additional challenge still facing all of us who have the responsibility for looking beyond currently approved programs. By the time the Space Shuttle becomes operational in 1980, all of NASA's presently approved programs will have been completed. This means an intensive planning effort during the remainder of this decade, with strong emphasis on getting new programs approved through the political process. Continuity and progress in our space effort depend greatly on Presidential leadership and on enthusiastic support from a bipartisan majority in the Congress. In recent years, President Johnson gave his commitment to Skylab and Viking. President Nixon has provided the backbone and thrust for a strong balanced effort in this decade, emphasizing practical benefits, commitment to the Space Shuttle, the Apollo-Soyuz joint mission with the Soviet Union, and continued exploration of the planets through 1977.

We in NASA and our colleagues in science and industry have a special responsibility now to plan wisely for the new program recommendations in order to merit continued support from the Presi-

dent, the Congress, and a well-informed public in the years ahead. As matters now stand, we have approved programs for about half of the next 15 years. The general direction in which we should be headed—and are headed—is clear enough. But now the task of planning for the most effective uses of the Space Shuttle and of our growing capabilities to explore the planets with unmanned spacecraft looms large on NASA's agenda. We are fortunate to have the experience—and still have the time—to do a good job of timely planning for the second half of our next 15 years. I hope that by intensive use of manned and unmanned satellites in the new realm called Near Earth Space we can make this a most exciting and productive period.

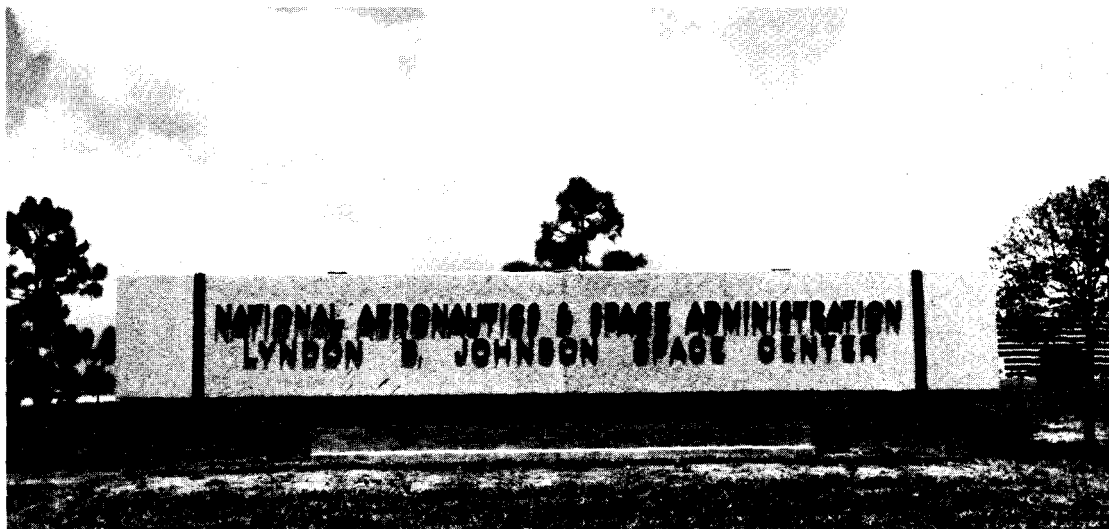
### JOHNSON SPACE CENTER IS FORMALLY DEDICATED

*Dr. Fletcher, Principal Speaker, Praises  
Late President for His  
Zeal*

The Lyndon B. Johnson Space Center in Houston, TX, renamed for the late President by act of Congress, was officially dedicated on August 27, the 65th anniversary of Mr. Johnson's birth.

Mrs. Lady Bird Johnson, his widow, spoke briefly. Her two daughters and a grandchild also were among those who participated in the program.

Texas Governor Dolph Briscoe was present and made a brief talk.



IT'S OFFICIAL—This is a photo of the sign at the main entrance to the Johnson Space Center that greeted those who attended the formal dedication ceremonies on Aug. 27.

As a part of the ceremonies, a bust of the late President was unveiled, and the "Johnson Room" in the Visitors Center, containing memorabilia from LBJ's Washington years, was opened to the public. Included were the desk used by the President in signing bills, editorial cartoons about the space program, and the original U.S. copy of the United Nations Outer Space Treaty signed by the United States, Soviet Union and many other nations.

Dr. James C. Fletcher, NASA Administrator, was the principal speaker. In opening his remarks, he referred to Johnson as "a crusader in mankind's conquest of space" and said: "We are here today to dedicate this newly-named Center to future decades of space achievement. Above all, we are here today to rededicate ourselves and NASA to achieving the peaceful uses of space which President Johnson saw for America and for mankind."

The Administrator described Johnson's contributions to the space effort as "unparalleled." They were the contributions, he added, "first, of a gifted lawmaker; then of a trusted advisor to the young President Kennedy; and finally they were the contributions of a President who suddenly bore the full responsibility for achieving the intent of laws he had written and the bold advice he had given."

Dr. Fletcher reminded that some have said and are still saying that the successful completion of the Apollo program was a logical stopping place for manned space flight, but commented that this was not the logic of LBJ.

"The decision to continue with a strong space program after Apollo may, in the long run," he said, "prove to be the most important of all the decisive actions Lyndon Johnson took on behalf of space progress."

Recalling that, in a world of rapid change, priorities shift quickly, the Administrator pointed out that the urgent needs of today are soon overshadowed by new concerns, new problems, and new priorities.

"And because we take pride in our pragmatism, we Americans tend to be an impatient people," he continued. "We insist that government programs produce immediate, visible results."

"Pragmatism is commendable, so long as it does not cause us to be shortsighted or succumb to the temptation to put aside programs of far-reaching importance—those whose long-term returns are difficult to define—in favor of instant-answer ef-

forts. Such impatience frequently leads us to deal with symptoms instead of causes. As a nation we should have great expectations. The space program is not an instant-answer program. It is a long-term investment in the future of mankind, an investment that deserves the support and commitment of all citizens."

He said it was fortunate for this nation and for the world that the four Presidents during the first 15 years of the Space Age had the courage, vision, and self-confidence to support a strong U.S. space effort.

Dr. Fletcher recalled that President Johnson, on a visit to the Houston center in 1968, made predictions that were remarkably prophetic, describing space developments which have actually taken place since then.

"It is most appropriate," he concluded, "that we take time out today to honor the man who did so much to give America this course and this momentum into space. And now, if I, too, may make a prediction, it is that many Presidents of the United States will come to the Lyndon B. Johnson Space Center in the decades ahead, and each will draw strength and inspiration from the fact that there was in the early years a man with the vision, the courage, the will, and the leadership of the man we honor today. We honor him, and the right and privilege to use his name honors this Center."

## NASA CENTERS HARD AT WORK AS 15th ANNIVERSARY NEARS

*With Many Successes Behind it, Agency  
Has Varied Plans for  
Future*

The National Aeronautics and Space Administration on the first day of October will observe its 15th anniversary amid a trail of successes that would draw the complete admiration of a Christopher Columbus and stagger the imagination of a Jules Verne.

While the first space laboratory in history orbits overhead, two spacecraft are on their way to take a close look at a giant planet, Jupiter. Even now Mars has been photographed so many times that what is considered a fairly true model of it soon will be placed on public display.

Six times NASA has landed men on the Moon. The first lunar mission beat by more than five months the deadline of sending astronauts there during the decade of the Sixties.